

THERMOPLASTIC MOLDING PROCESS AND APPARATUS

1 ABSTRACT OF THE DISCLOSURE

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3 A thermoplastic molding system includes a
4 thermoplastic extrusion die for the extrusion of a
5 thermoplastic slab. The extrusion die has adjustable
6 die gate members for varying the thickness of the
7 extruded material in different parts of the extruded
8 slab. The thermoplastic extrusion die has a trimmer
9 for cutting the extruded thermoplastic slab from the
10 thermoplastic extrusion die. A plurality of
11 thermoplastic molds, which may be either vacuum or
12 compression molds, are each mounted on a movable
13 platform, such as a rotating platform, for moving one
14 mold at a time into a position to receive a
15 thermoplastic slab being trimmed from the
16 thermoplastic extrusion die. A molded part is formed
17 with a variable thickness from a heated slab of
18 thermoplastic material being fed still heated from the
19 extrusion die. A plurality of molds are mounted to
20 the platform to feed one mold into a loading position
21 while a second mold is in a release position. A
22 thermoplastic molding process uses the thermoplastic
23 molding apparatus to mold a part of variable thickness
24 from a slab of material heated during extrusion.

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